

13 [New] The process according to claim 11, wherein cobalt is present in an electrolyte in oxidation state II.

14 [New] The process according to claim 11, wherein cobalt is present in a coordinated form.

15 [New] The process according to claim 14, wherein cobalt is coordinated with a solutant or solvent compound that has a high donor number.

16 [New] The process according to claim 15, wherein the solutant or solvent compound comprises an atom having a high donor number, selected from the group consisting of atoms of the nitrogen column.

17 [New] The process according to claim 11, wherein cobalt is coordinated with a specific ligand.

18 [New] The process according to claim 17, wherein the ligand comprises a function selected from the group consisting of pyridine, nitrile, phosphine, stibine and imine functions.

19 [New] A composition for electrolytic use, comprising a cobalt salt, a zinc salt, a solvent and a cobalt ligand.

20 [New] A process for the electrolytic synthesis of an organozinc compound, comprising the step of subjecting to an electrolysis on an inert cathode a composition comprising a cobalt salt, a zinc salt, a solvent, a cobalt ligand, and an organic halide.

21 [New] A process according to claim 20, wherein the organozinc compound is an aromatic or vinyl organozinc compound.

22 [New] An aromatic organozinc compound comprising:

- an sp₂ carbon atom,
- at least one aniline group not more than monosubstituted,
- an SO₂ group, and
- a zinc-bearing function,

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wherein the aniline group, the SO₂ group, and the zinc-bearing function are bounded to the sp₂ carbon atom.

23 [(New) An aromatic organo zinc compound according to claim 22, wherein the sp₂ carbon atom is comprised in an aromatic group.